National Renewable Energy Laboratory

Innovation for Our Energy Future

A national laboratory of the U.S. Department of Energy
Office of Energy Efficiency & Renewable Energy

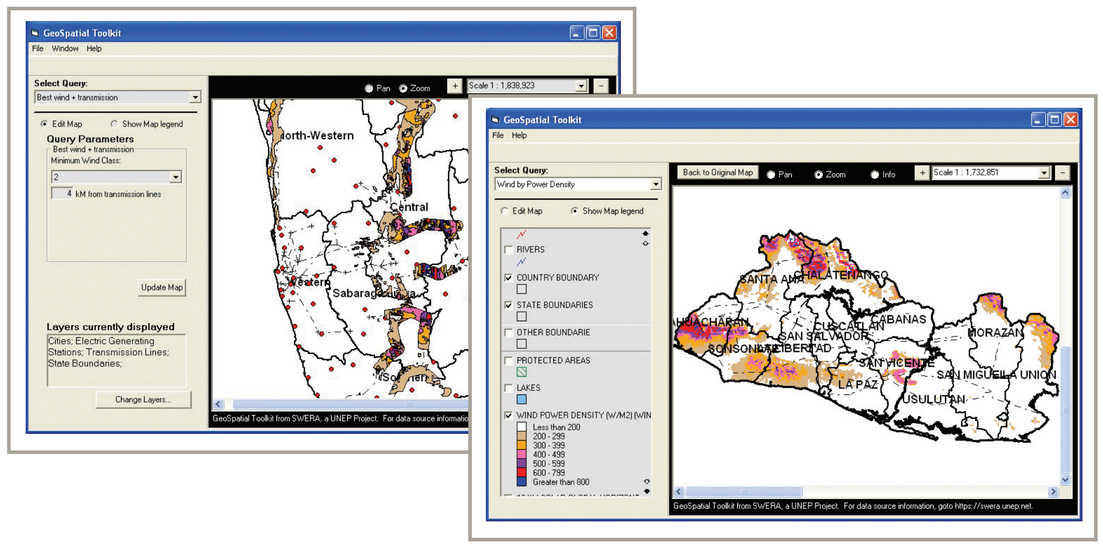
Key Models and Tools Produced by NREL's Energy Analysis Office (EAO)

SOLAR AND WIND ENERGY RESOURCE ASSESSMENT (SWERA)

The availability of reliable, accurate, and easily accessible solar and wind energy resource data is critical — and it can greatly accelerate the deployment of these technologies. The Solar and Wind Energy Resource Assessment (SWERA) is a pilot project designed to compile such data in 13 developing countries and to facilitate investments in solar and wind energy projects. The EAO developed a Geo-spatial Toolkit, which uses a Geographic Information System (GIS) to easily access this data.

The SWERA Geo-spatial Toolkit is:

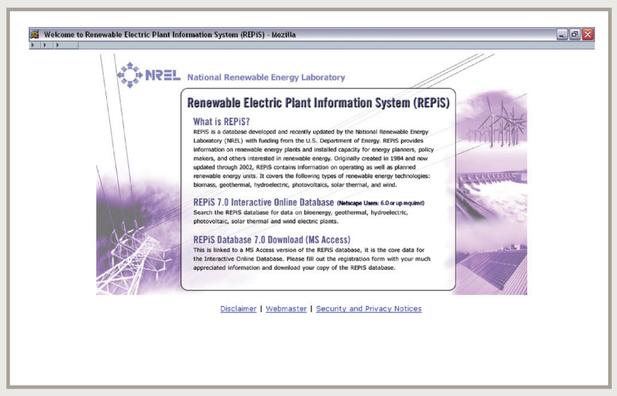
- Easy to use — not directed at a technical audience,
- Lets people with no GIS experience look at and analyze GIS data,
- Will be distributed free with resource data to 13 countries that are part of the SWERA project,
- Can facilitate renewable development in these countries by providing easy access to the resource data, and
- Is being integrated with the project analysis tool HOMER.



analysis.nrel.gov/swera3

RENEWABLE ELECTRIC PLANT INFORMATION SYSTEM (REPIS)

Renewable Electric Plant Information System (REPIS) is a database developed and soon to be updated by EAO at NREL. REPIS includes information on operating (as well as planned) renewable energy units for biomass, geothermal, hydroelectric, photovoltaics, solar thermal, and wind energy technologies. This data represents an inventory of all known U.S. grid-connected renewable electric facilities in the United States. REPIS is available online or downloadable as an Access database.



www.nrel.gov/analysis/repis/

GREEN POWER NETWORK (GPN)

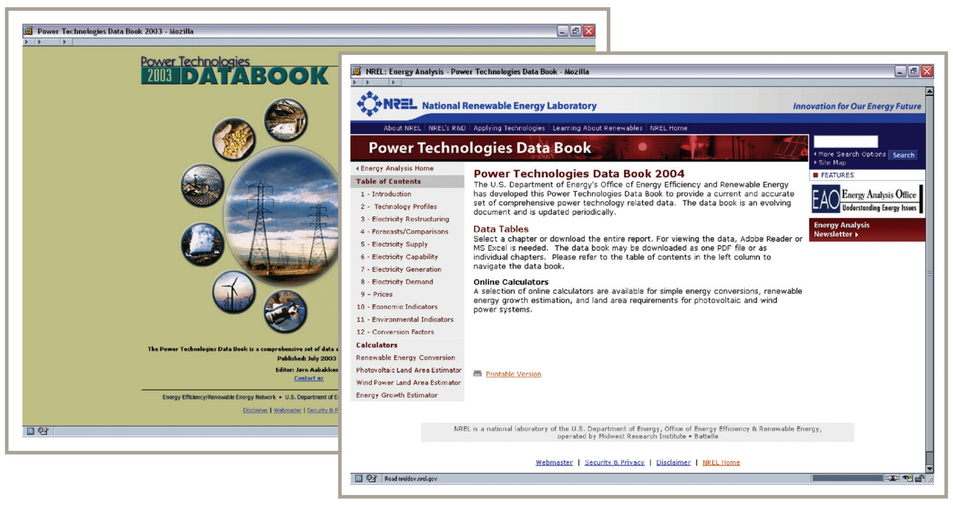
The Green Power Network (GPN) provides news and information on green power markets and related topics. The site provides up-to-date information on green power providers, product offerings, consumer protection issues, and policies affecting green power markets. It also includes a reference library of relevant papers, articles, and reports. The Green Power Network is operated and maintained by NREL for the U.S. Department of Energy (DOE).

www.eere.energy.gov/greenpower/

POWER TECHNOLOGIES DATA BOOK (PTDB)

The Power Technologies Data Book (PTDB) compiles — in one document — a comprehensive set of data about power technologies from a diverse set of data sources. This publication (available online) contains more than 200 pages of renewable energy data and complete technology profiles for renewable energy and distributed power technologies.

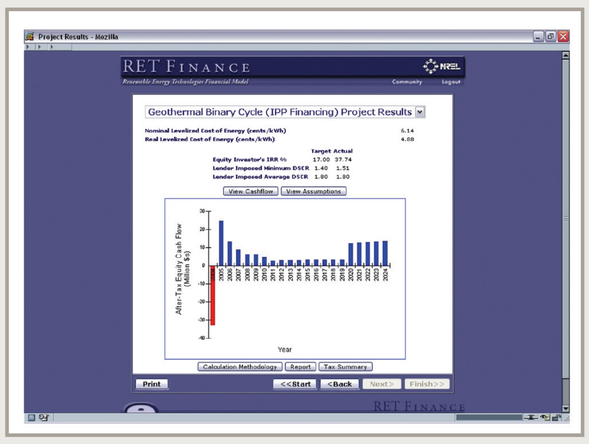
The PTDB contains a variety of charts and tables on electricity restructuring, power technology forecasts and comparisons, electricity supply, electricity capability, electricity generation, prices, economic indicators, environmental indicators, and conversion factors. The PTDB is downloadable at no cost.



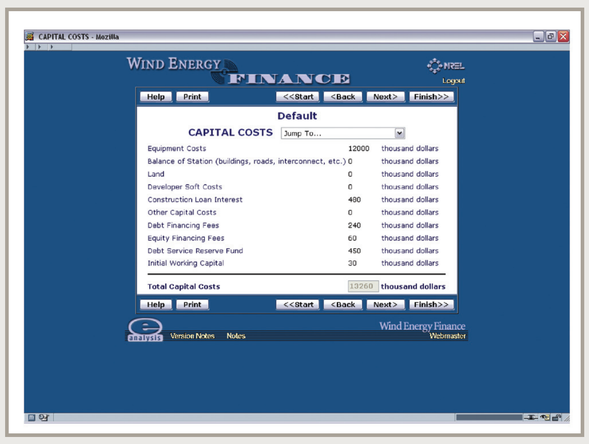
www.nrel.gov/analysis/power_databook/

RET FINANCE/WIND ENERGY FINANCE

RET Finance and Wind Energy Finance are online cost-of-energy calculators for renewable energy power projects. Users can specify capital costs, operating expenses, financing assumptions, tax rates, and economic assumptions to suit their situation. The model generates a 15-, 20-, 25- or 30-year cash flow for the lifetime of the project. Users can define unlimited number of projects that are associated with the user's account, where information can be saved for future use. RET Finance allows users to analyze projects for geothermal, solar, and wind energy, while Wind Energy Finance offers more detailed assumptions for wind power projects. RET Finance and Wind Energy Finance are accessible online at no cost.



analysis.nrel.gov/retfinance



analysis.nrel.gov/windfinance

EAO Energy Analysis Office
Understanding Energy Issues

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